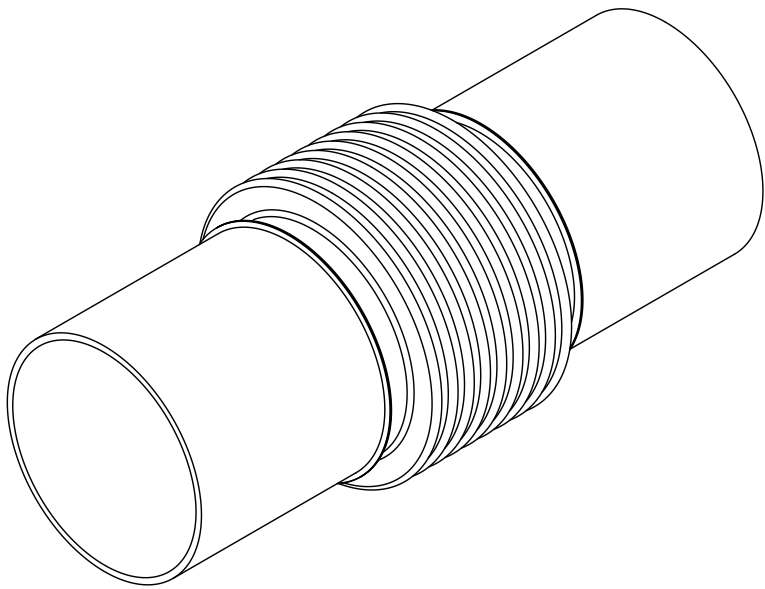
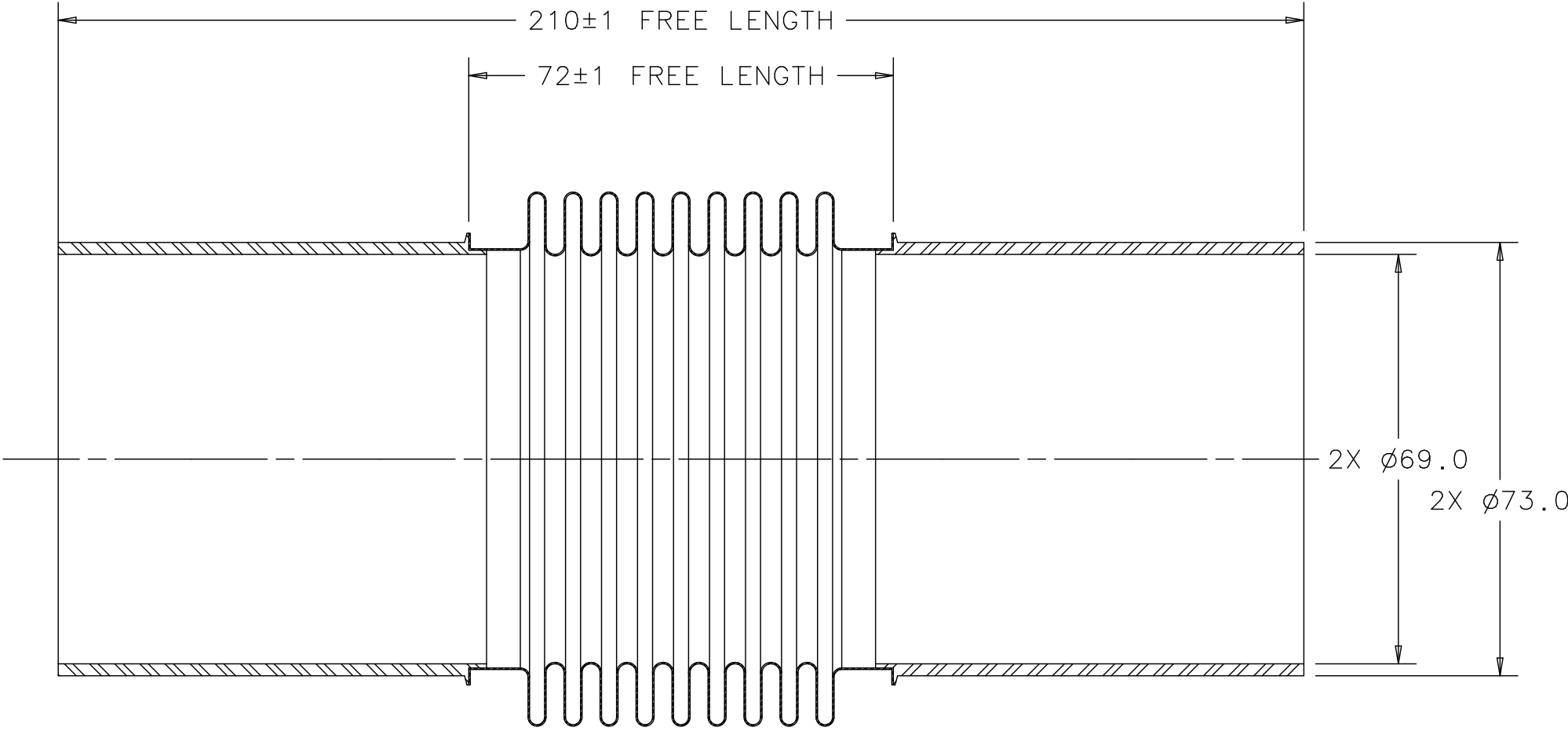
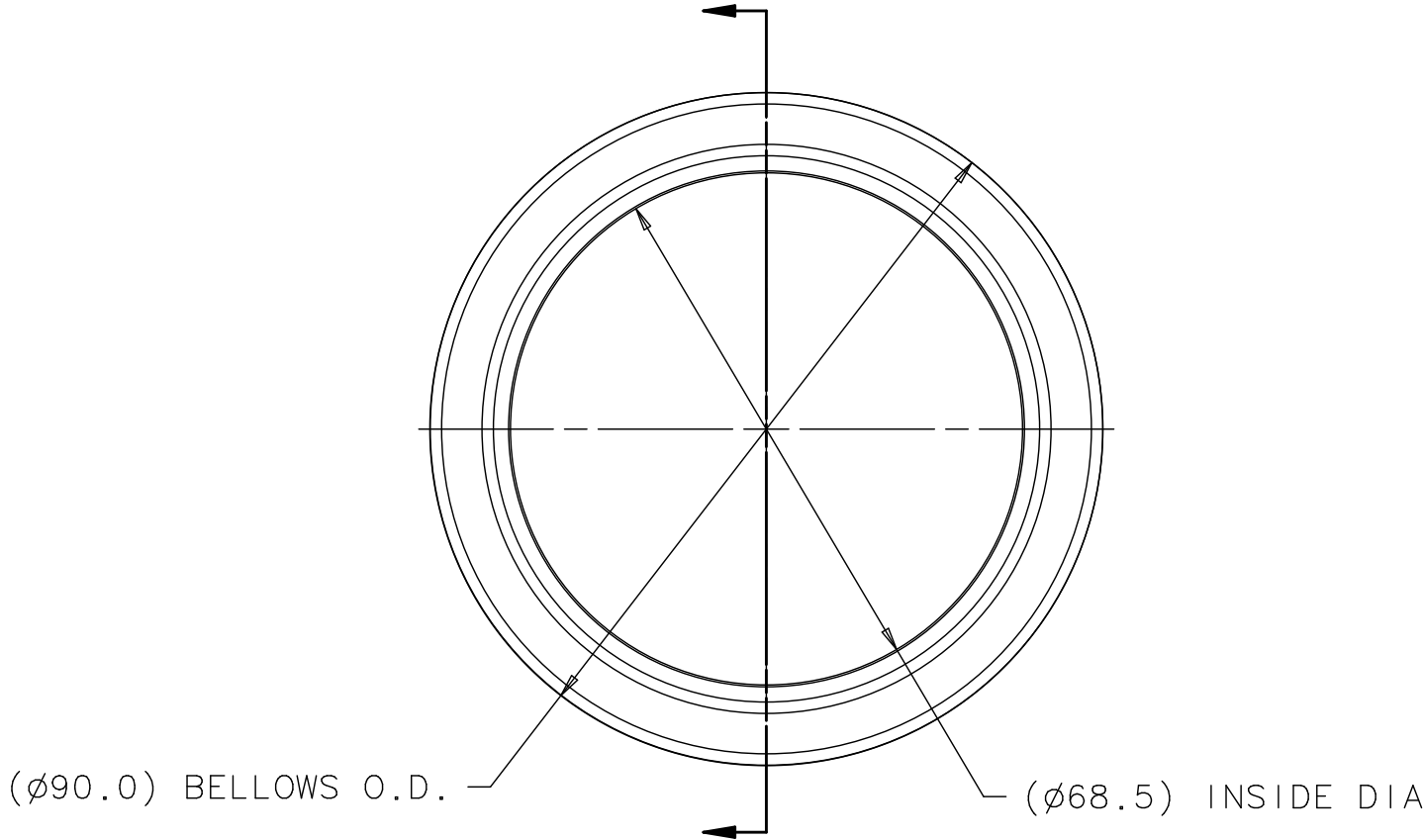


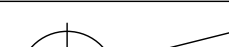


REVISION HISTORY				
CAD MAINTAINED. CHANGES SHALL BE INCORPORATED BY THE DESIGN ACTIVITY.				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	INITIAL RELEASE: ILC-000017		
	B	ECO # ILC-000019 SPELLING CORRECTIONS IN NOTES	14MAY09	F. LENZ
A8	C	ECO # ILC-000078 ADDED NOTE 6	12FEB10	Y.ORLOV



- NOTES (UNLESS OTHERWISE SPECIFIED):
- HYDROFORMED BELLOWS MUST BE CAPABLE OF \pm 5MM MINIMUM LENGTH CHANGE FOR MAXIMUM OF 10,000 CYCLES. BELLOWS CONSTRUCTED FROM TITANIUM, GRADE 2 SHEET, MINIMUM THICKNESS OF 0.13 MM [.005"], MAXIMUM THICKNESS OF 0.20 MM [.008"].
 - ALL WELDS TO BE VACUUM TIGHT, NO LEAK SHALL BE DETECTABLE ON THE MOST SENSITIVE SCALE OF A HELIUM DETECTOR WITH A MINIMUM SENSITIVE OF 2×10^{-10} ATM, CC/SEC.
 - DESIGN DETAILS SHOWN HERE ARE FOR REFERENCE ONLY. NON DIMENSIONED FEATURES CAN BE FABRICATED ST THE VENDOR'S DISCRETION.
 - PART MUST BE FREE OF DIRT, GREASE, OIL AND CHIPS.
 - MATERIAL CERTIFICATION WILL BE REQUIRED UPON DELIVERY OF BELLOWS 2 PHASE PIPE WELDMNT.
 - OPERATING PRESSURE:
6.a. 4 BAR WITH 2K.
6.b. 2 BAR WITH 293K.

-	-
NEXT ASSY	USED ON
APPLICATION	

FINISH N/A		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS INTERPRET DIM PER ASME Y14.5M-1994 BREAK ALL SHARP EDGES .75 MAX. ALL MACH. SURFACES 3.2 / MAX. <div></div>		DRAWN BY Y. ORLOV		DATE 29APR09		<div>FERMI NATIONAL ACCELERATOR LABORATORY UNITED STATES DEPARTMENT OF ENERGY P.O. BOX 500, BATAVIA, IL 60510-0500</div>									
				CHECKED BY DON MITCHELL		DATE 14MAY09											
MATERIAL AS NOTED		TOLERANCES X ± - .X ± 0.5 .XX ± - ANGLE ± 1°		THIRD ANGLE PROJECTION <div></div>		ENGINEERED BY Y. ORLOV		DATE 14MAY09		TITLE CM2 CRYOMODULE COLD MASS CM2 ASSEMBLY BELLOWS_2-PHASE_PIPE_WELDMNT							
						DATABASE DESY EDMS		TEAM/GROUP T4CM CRYOMODULE									
						CAD I-DEAS		SOLID MODEL NO. D00000000637333		SIZE A2		CAGE CODE OU5R6		DWG NO. D00000000874615		REV C	
										SCALE 1:1		DO NOT SCALE DWG		SHEET 1 OF 1			